



Dolphin Ecology Project Describes Unique Behavior

Marine Mammal and Sea Turtle Viewing Code



Photo: Laura Engleby

1. Remain a respectful distance from marine mammals and sea turtles. The minimum recommended distances are: dolphins, porpoises, seals=50 yards; sea turtles=50 yards; whales=100 yards. (Federal law prohibits all approaches to right whales within 500 yards.)

2. Time spent observing marine mammals and sea turtles should be limited to 1/2 hour.

3. Marine mammals and sea turtles should not be encircled or trapped between watercraft, or watercraft and shore.

4. If approached by a marine mammal or sea turtle, put your watercraft's engine in neutral and allow the animal to pass. Any vessel movement should be from the rear of the animal. (Pursuit of marine mammals and sea turtles is prohibited by Federal law.)

5. Never feed or attempt to feed marine mammals or sea turtles. (Federal law prohibits feeding or attempting to feed marine mammals.)

***Immediately report injured, stranded, or dead dolphins or whales by calling
1-800 Dial FMP (1-800-342-5367)***



Nancy Diersing, FKNMS Education Specialist

People who spend time in Florida Bay have been watching dolphins for years, but researchers had never fully described an unusual feeding behavior of bottlenose dolphins until recently when the Dolphin Ecology Project came along. "The Dolphin Ecology Project is a nonprofit organization

whose mission is to support

research and education on wild dolphins while promoting conservation of marine and estuarine ecosystems," according to project organizer, Laura Engleby. The Project is supported by grants and works in partnership with The Nature Conservancy, Duke University, and the Florida Keys National Marine Sanctuary. Working with volunteers and graduate students, Laura has been documenting the life history, habitat use, behavior, distribution, and general ecology of bottlenose dolphins in the Keys for the past three years. During that time, she has also observed and recorded an unusual feeding behavior in Florida Bay that had not previously been described by biologists studying these intelligent marine mammals.

The culminating moment in the feeding behavior takes place when an entire school of fish leap out of the water into the mouths of hungry dolphins, who are ready and positioned to capture the escaping prey. But, how do the dolphins get the fish to jump into their mouths? Apparently, one dolphin swims quickly in a circle (usually counter-clockwise) herding the fish toward the other dolphins that are already lined up next to one another, forming a barrier with their bodies. When the "ring-maker" dolphin circles back toward the others, the fish are effectively trapped and attempt to flee by leaping out of the water. At that moment, the hungry dolphins are ready with their heads above the water and mouths agape to catch the fish as they leap frantically through the air. This seemingly fun game of catch is a coordinated group behavior that takes place in less than a minute. On average, 4 dolphins participate in this feeding behavior, although researchers have documented between one to twelve dolphins engaging in mud-ring feeding. The same pod has been observed carrying out this feeding strategy up to 59 times in a three hour period.

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The behavior has been dubbed "mud-ring feeding" because a trail of mud is stirred up from the shallow bay bottom by the "ring-maker" dolphin. Mud-ring feeding is most commonly observed along the edges of mudbanks in waters about three feet deep and has been observed throughout most of Florida Bay. BBC Wildlife recently filmed this unusual feeding behavior; the footage will air on the Discovery Channel this Spring.

Using a field technique that allows individual dolphins to be identified, the Dolphin Ecology Project also collects information about the distribution of dolphins in the Keys. Each dolphin's dorsal fin is marked by notches and nicks that have been acquired over time and are unique to that individual. Photographs of the dorsal fins taken from a boat, along with location information are compiled in a photo-ID catalog that currently contains records of 185 individuals.



Photo: Laura Engleby

Even though additional nicks and cuts may be acquired through time, dorsal fins of dolphins provide a reliable means of identifying individual animals.

Recently, the Dolphin Ecology Project welcomed Ph.D. graduate student Leigh Torres, from Duke University, who joined the project to expand on the habitat use research that began two years ago. Other upcoming projects include investigating contaminants and conducting health assessments of Keys dolphins. To find out more about the results of the Dolphin Ecology Project or information on how to become involved, visit: <http://www.dolphinecology.org/FindOut/>.



Photo: Lee Tiller

Dolphins engaged in mud-ring feeding behavior prepare to catch the fish in mid-air.

*Note: This article appeared in the Spring 2002 issue of the newsletter of the Florida Keys National Marine Sanctuary, **Sounding Line**. For more information, visit: floridakeys.noaa.gov. The Dolphin Ecology Project conducts research under NMFS Scientific Permit Number 911-1466.*